BCPM Control   ☒

BCPM

Benchmark Cost Proxy Model

Inputs   Edit Views   Process   Reports   Quit   Review

There are six buttons on the main menu screen: EDIT VIEWS, INPUTS, PROCESS, REPORTS, REVIEW, and QUIT.

The EDIT VIEWS button allows you to select the program modules and data sets used when the model is processed. You can select from the configurations or Views provided, or create a custom View. You also select the states for which you would like results.

The INPUTS button allows you to view and modify the global and state-specific data inputs.

The PROCESS button allows you to select which modules you would like to process (Loop, Transport, Switching, Signaling and Capcost). It also allows you to confirm the states and View you have selected.

The REPORTS button allows you to set report parameters and formats and generate reports.

The REVIEW button allows you to examine the calculations performed under the View you have selected or created.

The QUIT button returns you to the BCPM START screen. Select File, Exit from the Excel menu to end your session.

Edit Views

By allowing for various configurations or Views, BCPM allows the user to control the modules and data sets processed by the model. The user can create a custom View or use one of the default Views provided. The default Views are described below:

- BCPM View – BCPM sponsors[1] default view

- BCPM 18K View – BCPM sponsors' default view incorporating FCC specification for 18K grids

- FCC View - BCPM sponsors' view for FCC depreciation lives and cost of money

- FCC 18K View – BCPM sponsors' view with FCC depreciation lives, cost of money and 18K grid specification

By selecting the EDIT VIEWS button from the main dialog box, you can see the module and data sets associated with each of the default Views, as shown below:

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[1] BCPM sponsors include BellSouth, Sprint, and US WEST.

The four sections of the **EDIT VIEWS** window are described below:

Selecting Views

The top left window allows you to select a View to process. When you select a View, the date it was created and a description are displayed.

Selecting States

The states that could be processed and those selected are shown in the top right window. You can select a state by highlighting the state name and clicking the ">" button. To ensure all states are available under a particular view, select the ">>" button. To remove one or all of the states from the selected list, use the opposing arrow(s) buttons. Any combination of states can be associated with a particular view.

Modifying View Module or Data Sets

The bottom left window includes the existing setup of the View in table form. To change the module file or data set used, highlight the appropriate module and select the replacement module or data set from the corresponding drop down menus.

Modifying View Files

You can Delete a view, modify an existing view (Update), create a New view or Close in the dialog box in the bottom right window.

If you would like to edit data inputs, make sensitivity runs, or modify modules, it is recommended that you create a new View rather than modify an existing file.
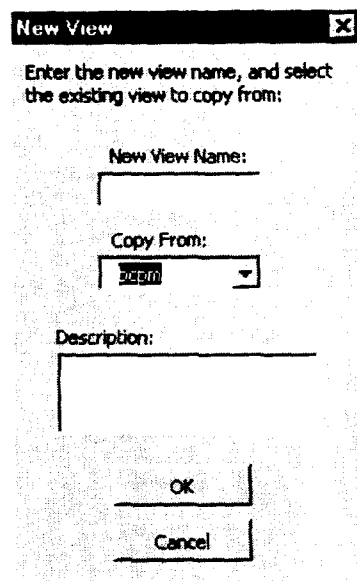
When you click on the New button, you are presented with the following dialog box:

New View ☒

Enter the new view name, and select the existing view to copy from:

New View Name:

Copy From:

bcpm ▼

Description:

OK

Cancel

The New View dialog view you wish to copy you are creating. After **OK** button and the you can select it from and modify the module processing, as your modifications, under the new View file

box asks you for a name, the existing from, and a text description of the view you enter the information, click on the system will create a new View. Then, the View window as described above set, data set, or states available for necessary. When you have completed select Update to save your changes name.

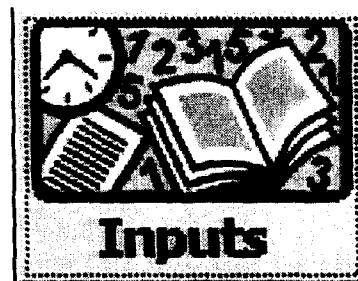Once you have created inputs.

a new View you can then modify

Changing

To change inputs, click dialog box.

Inputs
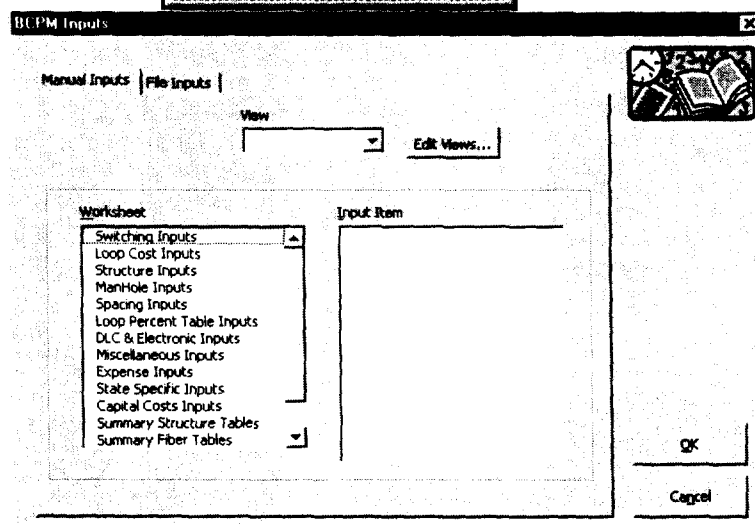
on the **INPUTS** button in the main

Manual Inputs

When you click on the Inputs Dialog Window. the top of the window. You Dialog Window.

Inputs

INPUTS button you will see the Click on the Manual Inputs tab on will then see the Manual Inputs

BCPM Inputs ☒

Manual Inputs | File Inputs |

View

▼ Edit Views...

Worksheet	Input Item
Switching Inputs ▲	
Loop Cost Inputs	
Structure Inputs	
ManHole Inputs	
Spacing Inputs	
Loop Percent Table Inputs	
DLC & Electronic Inputs	
Miscellaneous Inputs	
Expense Inputs	
State Specific Inputs	
Capital Costs Inputs	
Summary Structure Tables	
Summary Fiber Tables ▼	

OK

Cancel

First, select the view that you want to edit. Then, in the worksheet box, highlight the type of inputs you would like to modify. A list of the input tables will appear. Select the specific inputs you wish to edit. Below is the screen that would appear if you chose to change the inputs relating to normal aerial cable in the BCPM View:
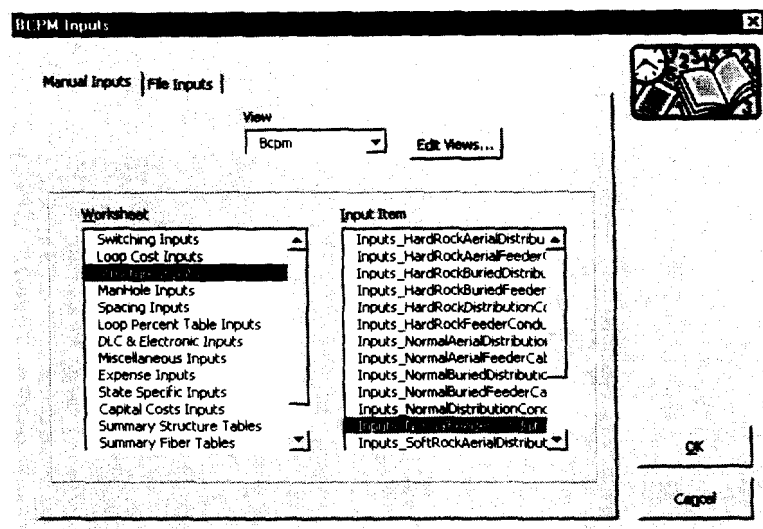
After highlighting the input you wish to change, click on the OK button. The system will run for approximately 30 seconds while it populates the worksheet and displays the appropriate table for editing (shown below).

SPECIAL NOTES

• It is important to notice the toolbar that BCPM 3.0 provides during editing.

- The BCPM Input toolbar allows you to **SAVE, PRINT, COPY, PASTE VALUES** and **C̲lose.**

- Once you have made your data input changes, click on the **SAVE** button on the BCPM bar. **IF YOU DO NOT USE THIS TOOLBAR TO SAVE YOUR CHANGES THEY WILL NOT BE PROPERLY SAVED IN THE PROGRAM FILES.** Do not use the Microsoft Excel toolbar to save your file.

- Only change the items highlighted in blue. The model calculates the numbers in black.

- You may change other inputs in the Excel Workbook that you have opened without going back to the **INPUTS** dialog box. Click on the appropriate tab and scroll to the table you would like to change. Save your modifications using the BCPM Input toolbar. To end your editing session, click **CLOSE** on the BCPM Input toolbar; you will be prompted to save your work as you exit. Once you leave the **INPUTS** screen, click on the Cancel button to return to the main dialog box.

- Do not change the values in the summary tabs at the bottom of the worksheet. The summary tables are calculated by the model and are for viewing purposes only.

File Inputs

The File Inputs tab allows you to create state-specific data input files for line counts and switch investments by wire center. By creating these files, you can override the line counts and switching investments developed by BCPM. They will be used in model calculations regardless of the View that is selected.

The data input files that you can populate are listed below:

FCC Lines	Includes line counts by wire center in a format matching FCC data requirements. BCPM will adjust grid line estimates at the wire center level to reflect the line counts entered.
FCC Switching File	Worksheet designed to incorporate FCC Switching investments by wire center.
ALSM	Worksheet formatted to allow ALSM (Audited LEC Switching Model) switching investments to be entered by wire center.
SCM	Worksheet formatted to allow SCM (Switching Cost Model) switching investments to be entered by wire center.
Switching User Data	Worksheet designed to allow switching investments from models not listed to be incorporated.

Changing File Inputs - FCC Lines

Below is the screen that is displayed when you click on the File Inputs tab:

To create or change a file, select a state and the type of file you wish to create. BCPM will open
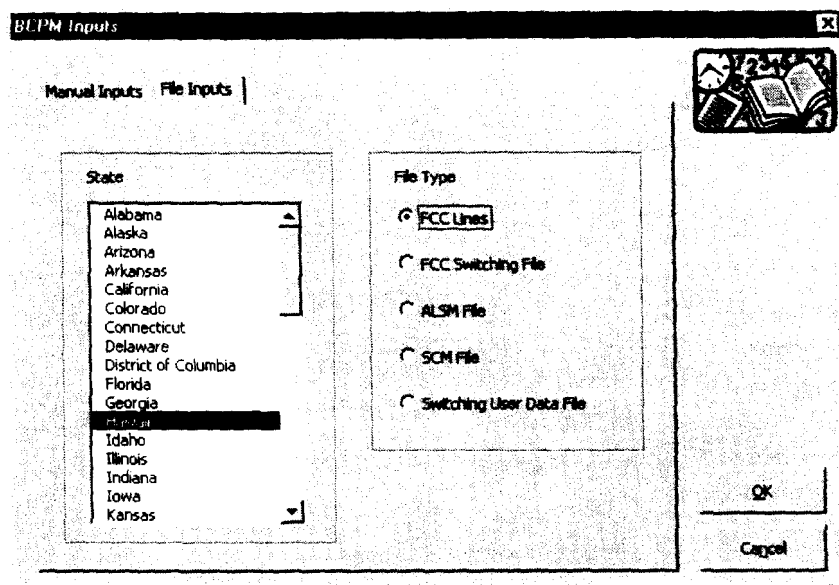
the appropriate worksheet and you can enter the data inputs. The worksheet used for FCC Lines is shown below:
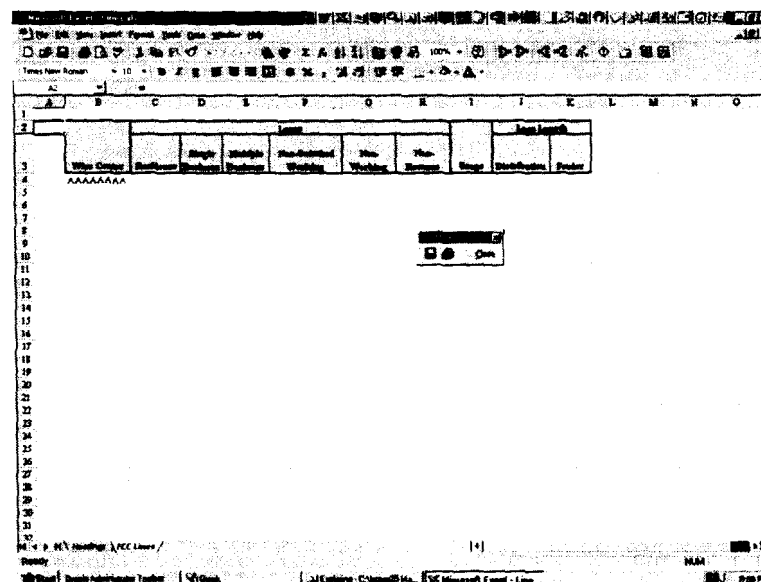
Enter the 8 digit code (not the 11 digit code) for the wire center and the actual lines counts for each column. Use the BCPM toolbar to save your entries.

SPECIAL NOTE

Regardless of the View selected, whenever the FCC Lines file is populated, line estimates will be adjusted at a wire center level to reflect the data entered.

Changing File Inputs - Switching Investments

Below the screen that will appear if you chose to create an alternate file for switching investments:
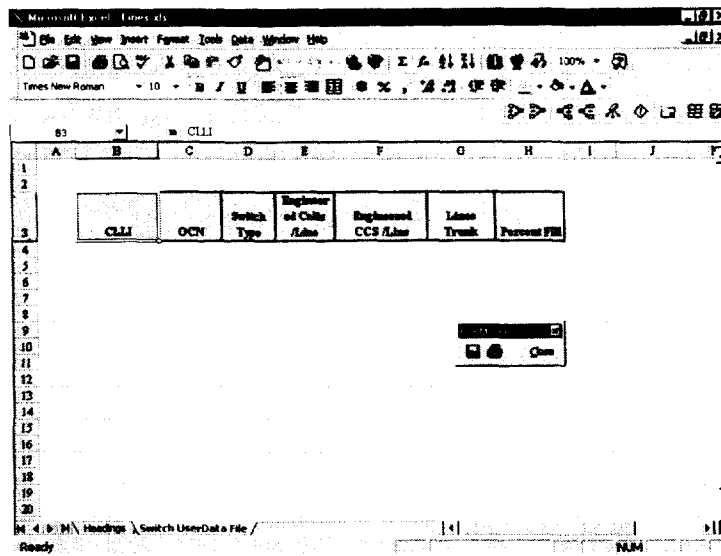
Once you have entered the switching investments by CLLI code, use the BCPM toolbar to save the file. Now, you can produce results by running the model.

PROCESSING THE MODULES

The **PROCESS** step combines user specific inputs with grid data and BCPM logic to create proxy investment levels.

Note: The BCPM has been processed under the BCPM View before you received it. It is not necessary to process again to generate reports for the BCPM View. Select REPORTS to review the results calculated.

To run the model under a different view or with new user inputs, click the **PROCESS** button on the main dialog box (shown below).

The following dialog box will   appear:
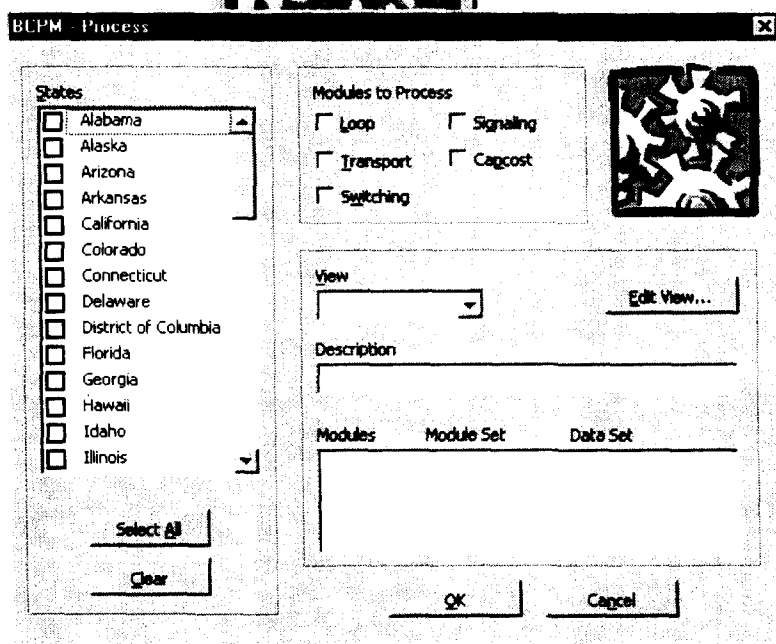
Select the appropriate View from the drop down menu to populate the **PROCESS** dialog box as shown below:
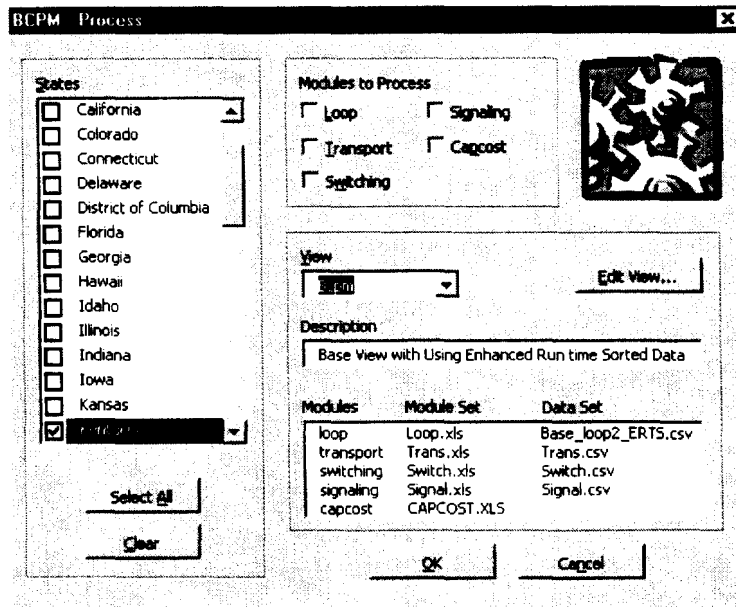
The View selection will automatically display the states that were associated with that particular view. Select the states you would like to process by clicking on the appropriate check boxes.

The Loop, Transport, and Switching Modules produce network investments.

(Signaling investments are incorporated in the Reports Module; a separate module is not yet available.) The Capcost Module develops annual cost factors which are applied to investment in the Reports Module to determine depreciation, cost of money, and taxes. Select the modules you would like to process by selecting the associated check boxes.

After you have selected the states and modules to process, click on the **OK** button. The system will produce results in between 20 minutes to a few hours depending on your hardware setup.

Once this step is complete, you can generate reports.

Reports

In the Reports Module, Signaling investments are added to the investments developed by the Loop, Switching and Transport Modules. To develop the associated monthly costs, the annual cost factors from the Capcost Module are applied and expenses are calculated.

By selecting the **REPORTS** button from the main dialog box, you can chose reports to process, set report parameters, and select report formats.

The Reports dialog box shown below:

Report Proce

First, click on Module and R costs. The Re
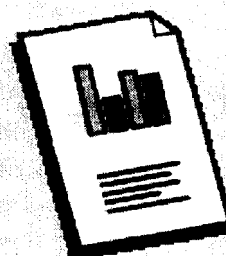
that is displayed includes three tabs as
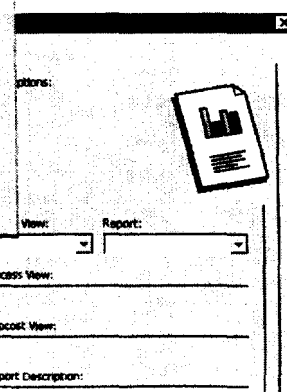
ect the View, Capcost se to calculate monthly rs below:
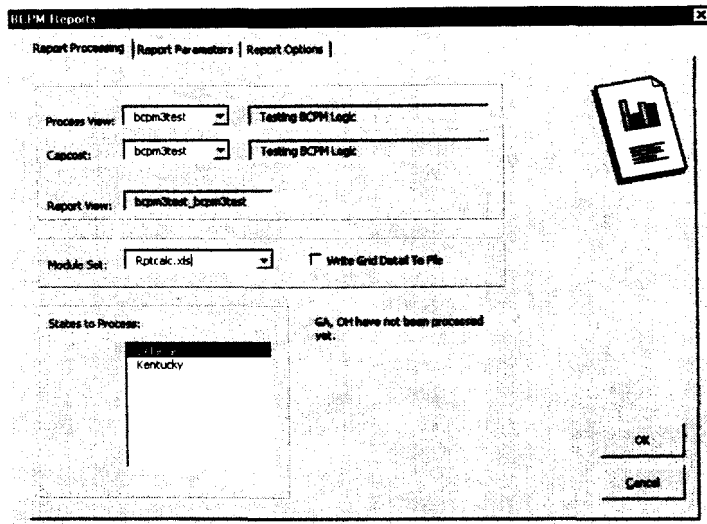
After you select a View, a list of states that have been processed for this View appears. States that have been selected for the View but not yet processed are also indicated. Select the states you would like results for and click the OK button to perform the report calculations. The system will process for approximately 15 – 30 minutes, depending on your computer hardware.

SPECIAL NOTE

You can not produce reports for a state unless the Loop, Transport, Switching, and Capcost Modules have been processed for the selected View under **PROCESS**. When you receive BCPM, the modules will have been processed for the BCPM View so that reports can be viewed or printed immediately. For new or other existing Views, you must follow the instructions under **PROCESS** before you generate reports.

The only states that will appear in the state selection box are those that are currently associated with the View displayed. If you would like to process reports for a state not listed, select cancel, **EDIT VIEWS**, and add the state under Selection for the View you are using. Then **PROCESS** the state before returning to **REPORTS**.

Report Options

Under the Report Options tab, you can indicate the report formats that you would like to view and print under Report Parameters.

You can select sort results by c parent company

For Summary a on the appropri

You can indicat how many repo printed for even

The Available F After you have preview and/or

Report Parame
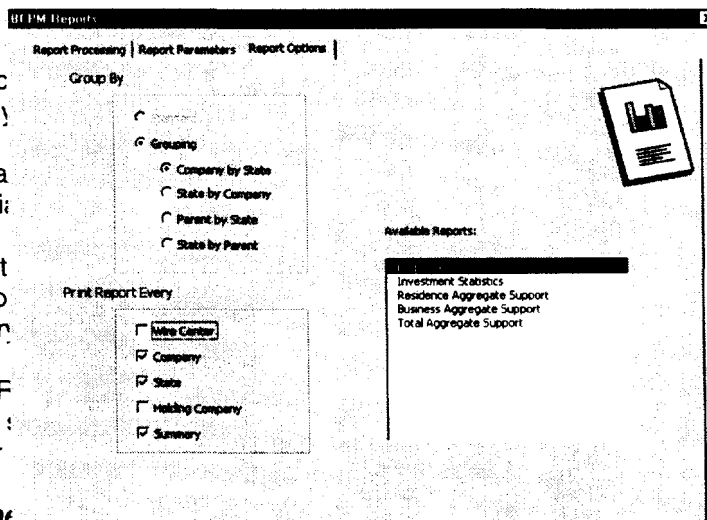
; appear. You can y state, or by state by

opulated by clicking

. This determines er, a report will be

printed. ameters tab to

Next, establish report parameters by completing the Report Parameters tab shown below:

Select the
Report View and
Report Type to
populate this
screen. **You
may only
select report
views that you
have
processed.**
The report
options are
described
below:

- Detail – This
  will create a
  workbook with Area Summary, Uncapped Analysis, Capped Analysis, Uncapped Density
  Summary, Capped Density Summary, Uncapped ARMIS Format, Capped ARMIS Format,
  Household Summary, Inventory and Variables tabs.

- Summary – This will create a summary workbook based on the inputs on the Report Options
  tab of the reporting module. The report options are group and report breakout settings in
  Loop Statistic, Investment Statistic, Residence Aggregate Support, Business Aggregate
  Support, and Total Aggregate Support.

- WC Summary – This will create a wire center summary report with the same parameters as
  the summary setting.

After you select the report view and type, set the report parameters by specifying the state,
company, holding company, or the wire center you want results for by highlighting your choice and
clicking **SELECT** or by clicking twice on the name of the company, state, etc.

Click Preview to view the model results in a worksheet format. A worksheet will appear and a
BCPM toolbar which will enable you to Print, Save As and Close. You can use the drop down
menu to select the report you wish to view, print or save.

Review

The review portion of the system is for auditing the module calculations in BCPM. Access this
subsystem by click on the **REVIEW** button.

When you click on the
dialog window.

REVIEW button you will see the Review

When you see this
screen you must
select a View.
Then you can
select the module
you would like to
review. The
system will work for
several seconds
while it pulls
module data. You
can then select the
state and the wire
center for review.
Click on the OK
button and the
system will present
you with the

workbook that contains the calculations for your selection. You can then evaluate the calculations
used for your View.

Technical Support

If you have any questions about the BCPM, call the INDETEC International Help Desk at 1-800-
746-4356.

BCPM

Benchmark Cost Proxy Model

Version 3.0

System Flows

BCPM Flows
Version 3.0

CONTROL.XLS

GIS Inputs

User Inputs

Loop Module

LERG*

Switching Module

Transport Module

Capcost Module

Report Processing

Report Generation

Reports

CONTROL.MDB

Loop Module Flows

User Inputs

Geographic Data

BASE_LOOP3.ERTS.CSV

Global Inputs

XXXX_MANUAL.CSV

State-Specific

FCC.LINES.CSV

CONTROL.MDB
Company,
Size,
Parent Co.,
etc.

Loop Logic

LOOP.XLS

Line Counts

XXXX_LINES.CSV

Investments

XXXX_LOOP.CSV
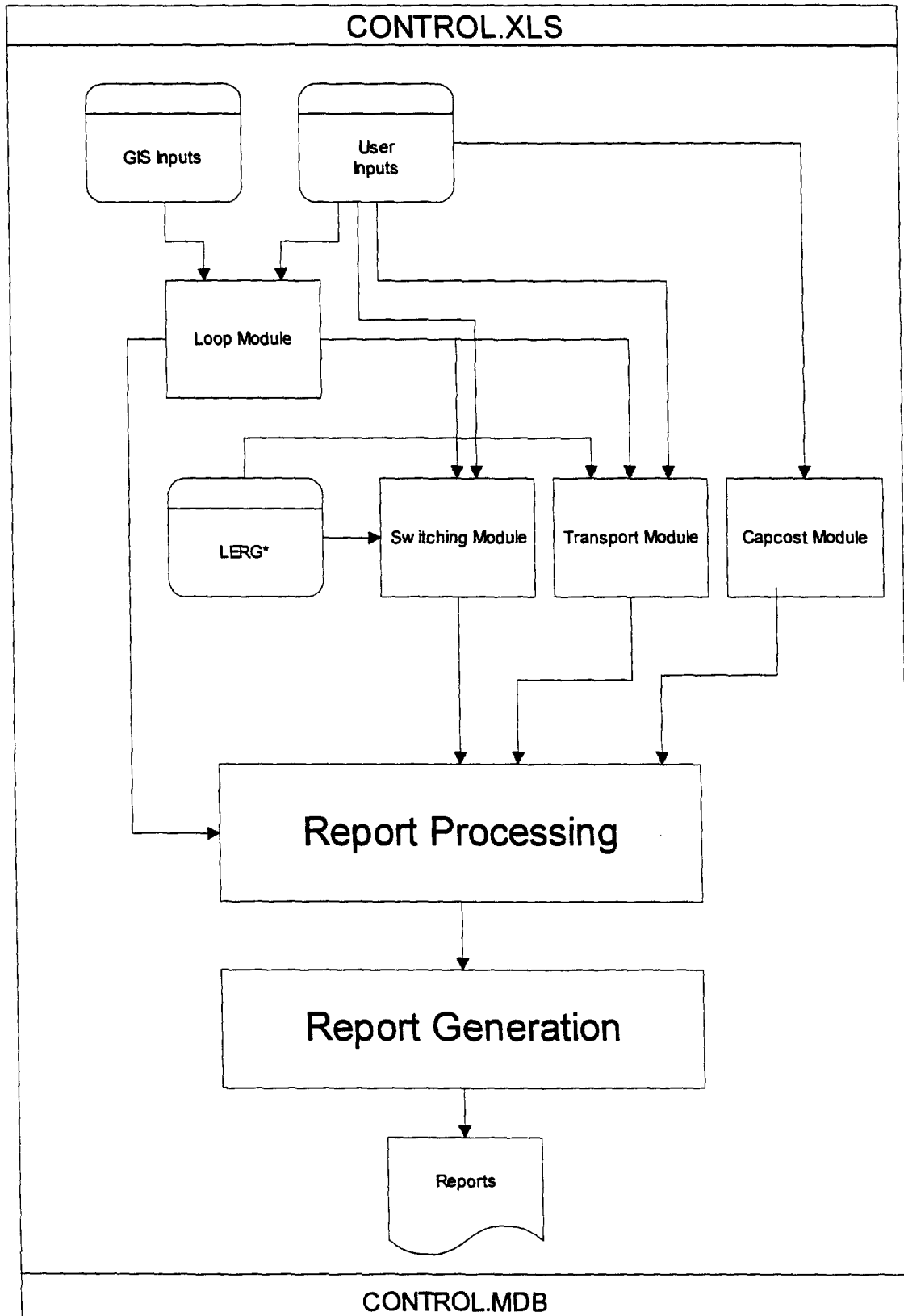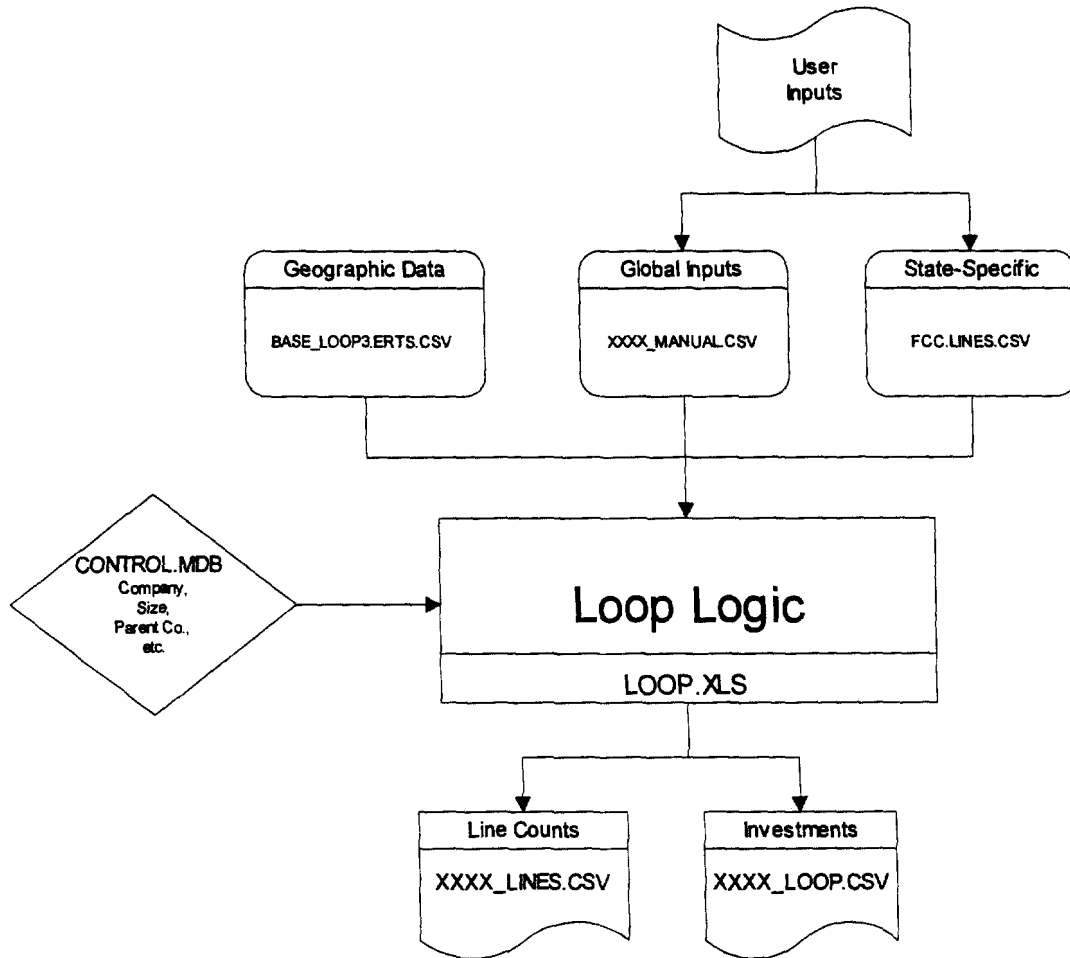
XXXX = View selected or created by the user

Switch Module Flows
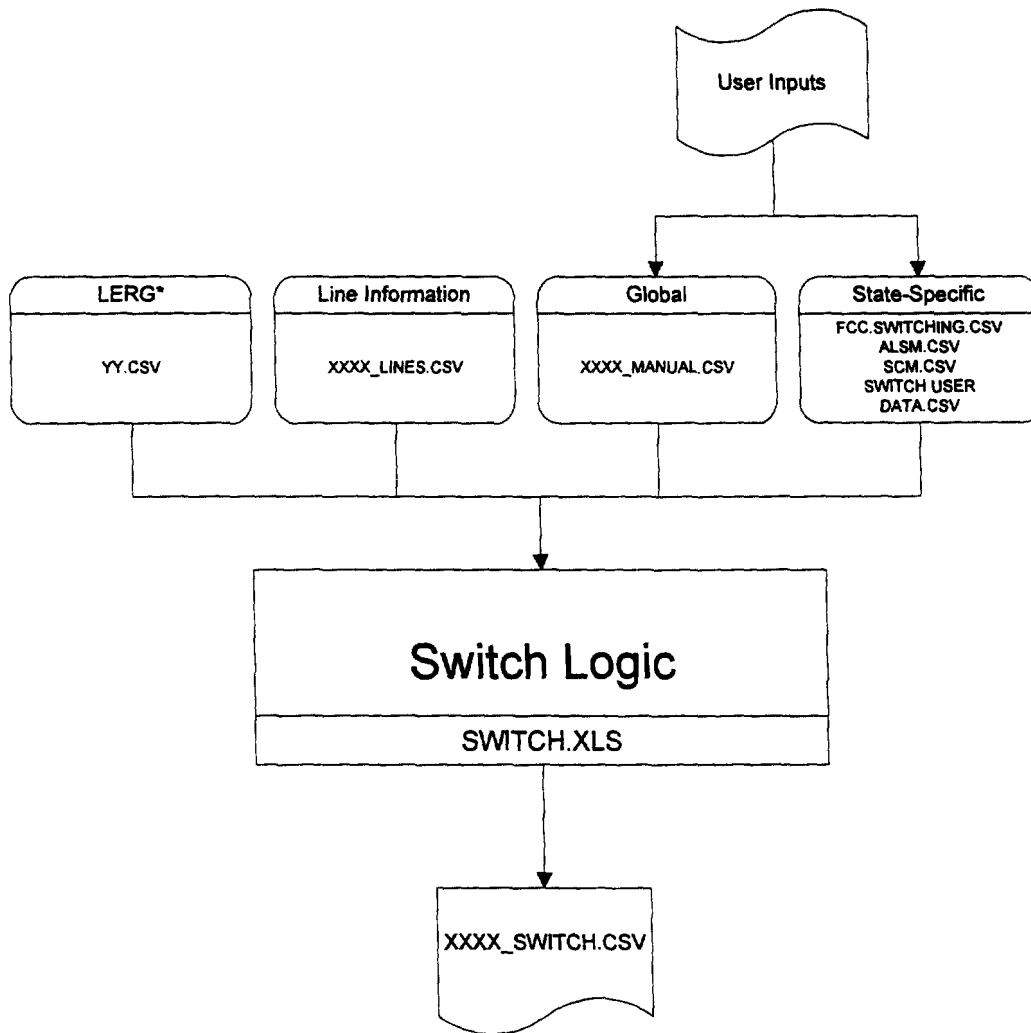
```
                                        ┌──────────────┐
                                        │  User Inputs │
                                        └──────┬───────┘
                                               │
                        ┌──────────────────────┼──────────────────────┐
                        │                       │                      │
                        ▼                       ▼                      ▼
┌──────────────┐ ┌──────────────┐ ┌──────────────┐ ┌──────────────────────┐
│    LERG*     │ │Line Information│ │   Global    │ │    State-Specific    │
├──────────────┤ ├──────────────┤ ├──────────────┤ ├──────────────────────┤
│              │ │              │ │              │ │  FCC.SWITCHING.CSV    │
│              │ │              │ │              │ │      ALSM.CSV         │
│    YY.CSV    │ │XXXX_LINES.CSV│ │XXXX_MANUAL.CSV│ │      SCM.CSV         │
│              │ │              │ │              │ │    SWITCH USER        │
│              │ │              │ │              │ │     DATA.CSV          │
└──────┬───────┘ └──────┬───────┘ └──────┬───────┘ └──────────┬───────────┘
       │                │                │                    │
       └────────────────┴────────┬───────┴────────────────────┘
                                  │
                                  ▼
            ┌─────────────────────────────────────────────┐
            │                                             │
            │              Switch Logic                   │
            │                                             │
            ├─────────────────────────────────────────────┤
            │               SWITCH.XLS                    │
            └─────────────────────┬───────────────────────┘
                                  │
                                  ▼
                      ┌──────────────────────┐
                      │                      │
                      │  XXXX_SWITCH.CSV     │
                      │                      │
                      └──────────────────────┘
```

* Local Exchange Routing Guide

YY = State abbreviation

XXXX = View selected or created by the user

Transport Module Flows
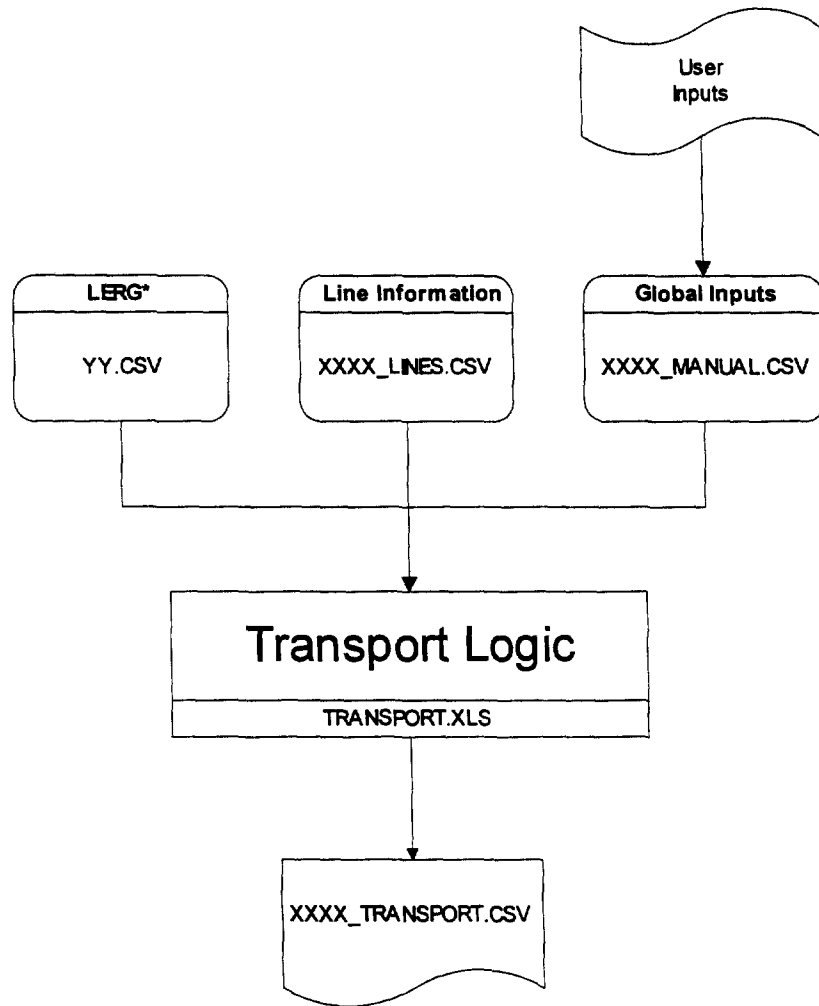
User
Inputs

LERG*	Line Information	Global Inputs
YY.CSV	XXXX_LINES.CSV	XXXX_MANUAL.CSV

Transport Logic

TRANSPORT.XLS

XXXX_TRANSPORT.CSV

* Local Exchange Routing Guide

YY = State abbreviation

XXXX = View selected or created by the user

Capcost Module Flows
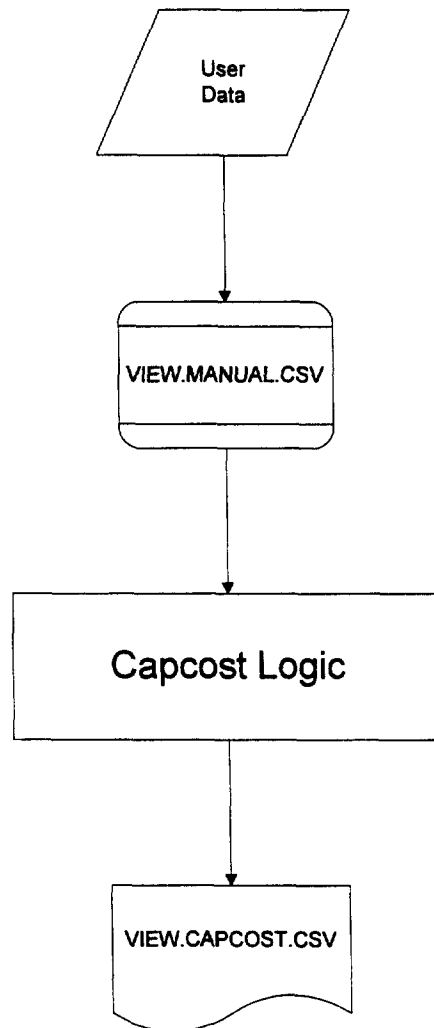
```
          /          /
         /   User   /
        /   Data   /
       /          /
              |
              v
      _____
     |                   |
     |  VIEW.MANUAL.CSV  |
     |_____|
              |
              v
      _____
     |                   |
     |   Capcost Logic   |
     |_____|
              |
              v
      _____
     |                   |
     | VIEW.CAPCOST.CSV  |
     |                   |
      _____/_____/
```

Report Processing

Loop Investments	Switching Investments	Transport Investments	User Data	Capital Cost Factors
XXXX_LOOP.CSV	XXXX_SWITCH.CSV	XXXX_TRANSPORT.CSV	XXXX_MANUAL.CSV	XXXX.CAPCOST.CSV

Report Processing

RPTCALC.XLS

XXXX.ZZZ_VIEW.
REPORT.CSV
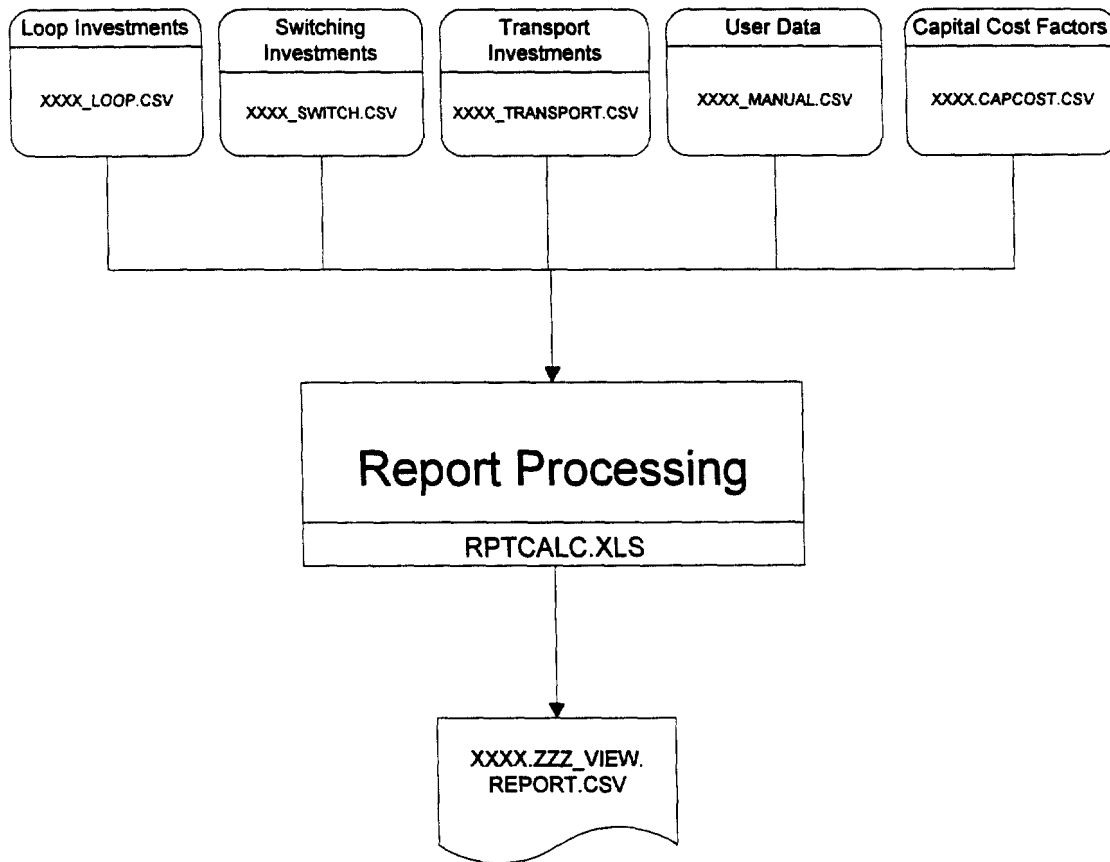
XXXX = View selected or created by the user

ZZZ = Capital cost module selected by the user

Report Generation

```
┌─────────────────────────┐
│       Report Data       │
├─────────────────────────┤
│                         │
│      XXXX.ZZZ_VIEW.      │
│       REPORT.CSV         │
│                         │
└─────────────────────────┘
```
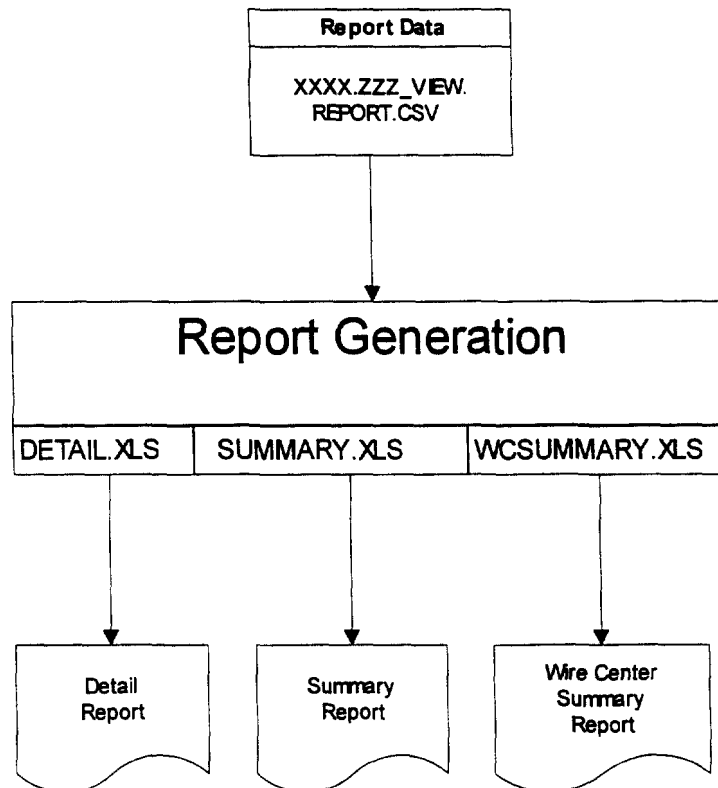
Report Generation

DETAIL.XLS	SUMMARY.XLS	WCSUMMARY.XLS

Detail Report	Summary Report	Wire Center Summary Report

XXXX = View selected or created by the user

ZZZ = Capital cost module selected by the user

BCPM

Release 3.0

MODEL LOGIC - EXCEL

BCPM

Release 3.0

Excel Logic Loop

Table of Contents

System Code

Workbook: C:\bcpm30\modules\loop\Loop3e.xls

File date: 12/8/97 12:43:14 PM
Comments:

Worksheets:
Grid Data
Grid Demographics
Distance Calculations
DLC to FDI
New Distribution
Term,Drop,&NID
Subfeeder Part2
SubFeeder
Main Feeder
Electronics&FDI
Main&SubfeederAllocation
Investment
Output
Miscellaneous Inputs
Electronic Tables
Miscellaneous Tables
Unit By Density Tables
Density By Unit Tables
Fixed Tables
FCC Data

Sheet: Grid Data

Col	Range Name	Column Name	Column Comment	Formula	Formula Comment
A	CLLI*	Clli			
B	Latitude	Latitude			
C	Longitude	Longitude			
D	Area_sq_Miles	Area-sq Miles			
E	DepthtoBedrock	Depth to Bedrock (Inches)			
F	RockHardness	Rock Hardness			
G	SurfaceSoilTexture	Surface Soil Texture			
H	WaterTableDepth	Water Table Depth (Feet)			
I	MinimumSoilSlope	Minimum Soil Slope			

J	MaximumSoilSlope	Maximum Soil Slope			
K	TotalBusinessLines	Total Business Lines			
L	BusinessLocations	Business Locations			
M	TotalHouseholds	Total Households			
N	HousingUnits	Housing Units			
O	SingleUnitDetachedHUlocations	Single Unit Detached HU Locations			
P	SingleUnitAttachedHUlocations	Single Unit Attached HU Locations			
Q	_2HUPerDwellinglocations	2 HU Per Dwelling Locations			
R	_3to4HUperdwellinglocations	3-4 HU Per Dwelling Locations			
S	_5to9HUperdwellinglocations	5-9 HU Per Dwelling Locations			
T	_10to25HUperdwellinglocations	10-19 HU Per Dwelling Locations			
U	_25to50HUperdwellinglocations	20-49 HU Per Dwelling Locations		= IF (ActualLoopCostPerLine > InvLoopCap, InvLoopCap, ActualLoopCostPerLine)	
V	Over50HUperdwellinglocations	>50 HU Per Dwelling Locations			
W	MobileHUlocations	Mobile HU Locations			
X	OtherHUlocations	Other HU Locations			
Y	LatitudeAtRoadCentroid	Latitude At Road Centroid			
Z	LongitudeAtRoadCrossing	Longitude At Road Centroid			
AA	AirlineDistance	Airline Distance Feet			
AB	FDICode*	FDI Code			
AC	MainFeederLength	Main Feeder Length			
AD	SubfeederLength	Sub Feeder Length			
AE	Part2SubfeederLength	Part 2 SubFeeder Length			
AF	ULQHousingUnits	ULQ Housing Units			

AG	ULQHouseholds	ULQ Households			
AH	ULQBusinessLines	ULQ Business Lines			
AI	ULQRoadLength	ULQ Road Length			
AJ	ULQArea	ULQ Road Reduced Area			
AK	PreULQHorizontal fttoRoadCentroid	Preliminary ULQ Horizontal Feet To Road Centroid			
AL	PreULQverticalftt oRoadCentroid	Preliminary ULQ Vertical Feet To Road Centroid			
AM	URQHousingUnits	URQ Housing Units			
AN	URQHouseholds	URQ Households			
AO	URQBusinessLines	URQ Business Lines			
AP	URQRoadLength	URQ Road Length			
AQ	URQArea	URQ Road Reduced Area			
AR	PreURQHorizonta lfttoRoadCentroid	Preliminary URQ Horizontal Feet To Road Centroid			
AS	PreURQverticalftt oRoadCentroid	Preliminary URQ Vertical Feet To Road Centroid			
AT	LLQHousingUnits	LLQ Housing Units			
AU	LLQHouseholds	LLQ Households			
AV	LLQBusinessLines	LLQ Business Lines			
AW	LLQRoadLength	LLQ Road Length			
AX	LLQArea	LLQ Road Reduced Area			
AY	PreLLQHorizontal fttoRoadCentroid	Preliminary LLQ Horizontal Feet To Road Centroid			
AZ	PreLLQverticalftto RoadCentroid	Preliminary LLQ Vertical Feet To Road Centroid			
BA	LRQHousingUnits	LRQ Housing Units			
BB	LRQHouseholds	LRQ Households			
BC	LRQBusinessLines	LRQ Business Lines			
BD	LRQRoadLength	LRQ Road Length			
BE	LRQArea	LRQ Road Reduced Area			